

Title (en)

A VARIABLE OPTICAL FILTER AND A WAVELENGTH-SELECTIVE SENSOR BASED THEREON

Title (de)

VARIABLER OPTISCHER FILTER UND DARAUF BASIERENDER WELLENLÄNGENSELEKTIVER SENSOR

Title (fr)

FILTRE OPTIQUE VARIABLE ET CAPTEUR À SÉLECTION DE LONGUEUR D'ONDE BASÉ SUR CELUI-CI

Publication

EP 3828605 A1 20210602 (EN)

Application

EP 20215111 A 20140128

Priority

- US 201361757846 P 20130129
- EP 14746665 A 20140128
- US 2014013449 W 20140128

Abstract (en)

An optical filter is described having a laterally variable transmission wavelength within a wavelength range, the optical filter comprising:a bandpass filter comprising a stack of alternating first and second layers comprising first and second materials, respectively;a blocking filter comprising a stack of alternating third and fourth layers, comprising third and fourth materials, respectively;wherein the first, second and fourth materials each comprise different materials, so that a refractive index of the first material is smaller than a refractive index of the second material, the refractive index of the second material is smaller than a refractive index of the fourth material, and an absorption coefficient of the second material is smaller than an absorption coefficient of the fourth material.

IPC 8 full level

G02B 5/28 (2006.01); **G01J 3/02** (2006.01); **G01J 3/12** (2006.01); **G01J 3/26** (2006.01); **H01L 27/146** (2006.01)

CPC (source: EP KR US)

G01J 3/0259 (2013.01 - EP US); **G01J 3/26** (2013.01 - EP US); **G02B 5/281** (2013.01 - EP KR US); **G02B 5/288** (2013.01 - EP KR US); **H01L 27/14621** (2013.01 - EP KR US); **H01L 27/14623** (2013.01 - EP US); **H01L 27/1463** (2013.01 - EP US); **H01L 27/14634** (2013.01 - EP US); **H01L 27/14643** (2013.01 - EP US); **H01L 27/14685** (2013.01 - EP KR US); **G01J 2003/1226** (2013.01 - EP US); **G01J 2003/1234** (2013.01 - EP US); **G01J 2003/1239** (2013.01 - EP US)

Citation (applicant)

- US 4957371 A 19900918 - PELLICORI SAMUEL F [US], et al
- US 6057925 A 20000502 - ANTHON ERIK W [US]
- US 6091502 A 20000718 - WEIGL BERNHARD H [US], et al

Citation (search report)

- [Y] US 5872655 A 19990216 - SEDDON RICHARD I [US], et al
- [Y] US 5926317 A 19990720 - CUSHING DAVID HENRY [CA]
- [A] US 2009220189 A1 20090903 - KIESEL PETER [US], et al
- [A] US 6700690 B1 20040302 - BUCHSBAUM PHILIP E [US], et al
- [Y] ANONYMOUS, SPIE, PO BOX 10 BELLINGHAM WA 98227-0010, USA, 20 October 2010 (2010-10-20), XP040545033
- [A] SHUMEI YANG: "Circular, variable, broad-bandpass filters with induced transmission at 200-1100 nm", APPLIED OPTICS, OPTICAL SOCIETY OF AMERICA, WASHINGTON, DC; US, vol. 32, no. 25, 1 September 1993 (1993-09-01), pages 4836 - 4842, XP000388200, ISSN: 0003-6935, DOI: 10.1364/AO.32.004836

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

US 2014210031 A1 20140731; US 9261634 B2 20160216; CN 104969352 A 20151007; CN 104969352 B 20180406; CN 108572409 A 20180925; CN 108572409 B 20220301; EP 2951621 A1 20151209; EP 2951621 A4 20161019; EP 2951621 B1 20210127; EP 3828605 A1 20210602; EP 3828605 B1 20231220; HK 1215494 A1 20160826; HK 1255669 A1 20190823; JP 2016513240 A 20160512; JP 2018063449 A 20180419; JP 2021076857 A 20210520; JP 6272627 B2 20180131; JP 7086239 B2 20220617; KR 102009739 B1 20190812; KR 102401136 B1 20220524; KR 20150111991 A 20151006; KR 20190095543 A 20190814; TW 201435316 A 20140916; TW 201825872 A 20180716; TW 202004137 A 20200116; TW 202219471 A 20220516; TW I623731 B 20180511; TW I662260 B 20190611; TW I739106 B 20210911; US 10312277 B2 20190604; US 10756131 B2 20200825; US 2016172416 A1 20160616; US 2017047366 A1 20170216; US 2018108694 A1 20180419; US 2019296067 A1 20190926; US 2021028213 A1 20210128; US 9515119 B2 20161206; US 9842873 B2 20171212; WO 2014120686 A1 20140807

DOCDB simple family (application)

US 201414166747 A 20140128; CN 201480006294 A 20140128; CN 201810315113 A 20140128; EP 14746665 A 20140128; EP 20215111 A 20140128; HK 16103346 A 20160322; HK 18114816 A 20181120; JP 2015555419 A 20140128; JP 2017255285 A 20171230; JP 2021009189 A 20210122; KR 20157023137 A 20140128; KR 20197023074 A 20140128; TW 103103285 A 20140128; TW 107111892 A 20140128; TW 108116949 A 20140128; TW 110129062 A 20140128; US 2014013449 W 20140128; US 201615017583 A 20160205; US 201615337489 A 20161028; US 201715837180 A 20171211; US 201916425280 A 20190529; US 202016947898 A 20200824